

DRAFT

STAFF STUDY

I. STATEMENT OF THE PROBLEM

A. How to establish a joint project office for CIA's SAFE and DIA's ADISS systems. The objective of any joint project office will be to maximize savings through common development and procurement while at the same time satisfying both CIA and DIA users' requirements.

B. This staff study outlines an organizational structure to meet these objectives and discusses management control, staffing, budgetary and fiscal, and general housekeeping procedures. The study also addresses the handling of CIA/DIA requirements, the system design and development approach and major milestones. The implications of such an organization on the two separate systems are also briefly discussed.

II. BACKGROUND

A. CIA's Safe System

1. In 1972, the DCI approved the initiation of a set of tasks directed toward providing CIA's analysts with the most "effective mix" of central files and special purpose files. Preliminary work with the various CIA analytical offices identified a strong requirement for a series of computer-driven functions that would enable an analyst to view his daily mail on-line, to route items to other offices or individuals, to build and query special analytical files and to have direct on-line access to full-text intelligence message files, a centralized index, and other Community and commercial data bases. Using these requirements, an Office of Central Reference (OCR) project team defined, built and tested a pilot system with many of these capabilities and implemented it in four branches in CIA production offices. Results from this test were reported on in late 1974 and reviewed by the DCI and an independent task team of industry and academic specialists. Based on these findings, the DCI approved development of an Agency-wide SAFE system. The original test system continues on a slightly expanded basis as the "SAFE Interim System." After the SAFE system go ahead was approved by the DCI, briefings on its concepts and the Interim System were provided to Intelligence Community and DoD personnel.

2. During 1975-76 requirements were formalized with heavy user participation and a project team was formed to develop and implement the system for the Directorate of Intelligence in CIA's Office of Data Processing (ODP). Initial SAFE funding was approved for FY 1977.

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3. The objective of SAFE is to provide CIA's Directorate of Intelligence analysts with the direct support of data processing technology in order to make the intelligence product better and more timely and to enable these personnel to handle a workload growing in both volume and complexity. The system will do this by providing a series of computer functions for disseminating, scanning, searching, filing, routing, and analyzing information stored in machine and microform storage and for composing and editing finished intelligence at an individual analyst's workstation.

4. CIA currently has study and support contracts outstanding and proposals in-house for a design competition phase.

B. DIA's ADISS System

1. DIA's ADISS effort has evolved from several separate DIA information system planning efforts, and is designed to overcome serious operational deficiencies or limitations in support in existing DIA intelligence information systems. ADISS is conceived as a system to provide general purpose data base functions, support distributed intelligence production and permit data base changes from multiple source inputs, provide analysts improved analytic capabilities using simplified user language and operational procedures, interconnect with other DoD and non-DoD systems, and support analysts and consumers in military commands world-wide.

2. The project technical goals are twofold:

a. To restructure and redesign the existing DIA intelligence data base holdings into a more efficient operational system that will better support the needs of analysts and consumers.

b. To modernize the existing DIA general purpose information handling system and provide for cost-effective integration of special purpose DIA sub-systems, such as the NMIC Support System and AIRES, into a unified DoD intelligence information handling environment.

3. DIA currently has a study contract outstanding for analysis of its intelligence information requirements, existing data base structure and content, and data flow to establish a technical definition of DIA's ADISS concept.

C. Commonality Question

1. The Congressional Conference Report on the FY 1977 budget for the two agencies recommended coordinated SAFE/ADISS developmental efforts to achieve "maximum commonality" and hence cost savings.

In response to this Congressional directive, project officers from the two systems met initially in October 1976 and arranged for briefings and an exchange of system documentation to determine the real potential of any cost savings. These meetings continued throughout the remainder of 1976 and into 1977 as the two agencies worked on identifying areas that were common to the two systems. Since both projects were in their initial stages, only general areas of potential savings were identified. An interim management plan was completed in February 1977 and revised in May 1977. The plan provides for joint CIA/DIA participation in procurement and joint identification of common developmental modules. The plan, however, is based on the concept of two distinct project offices managing two separate, but related, systems.

2. On 8 April 1977, the DCI requested D/DCI/IC to develop a simple statement of the specific differences in the requirements of SAFE and ADISS and to formulate a plan for merging the two systems into one. In responding to this requirement, the D/DCI/IC on 25 May 1977 recommended:

a. DIA complete its ADISS System Definition Study originally scheduled for September 1978 but a 1 January 1978 date was recommended.

b. CIA continue its SAFE Design and Analysis Studies but defer any SAFE-peculiar hardware/software acquisition until a configuration option is made.

c. An independent contractor be retained to make a thorough appraisal of SAFE and ADISS current documentation.

d. A DCI SAFE/ADISS Working Group be established to ensure that CIA and DIA are moving ahead on common concepts, to prepare a staff study on how to establish a joint project office, to monitor the external contractor for the DCI and to establish SAFE/ADISS Project Formal Review Milestones.

The DCI approved these recommendations on 9 June 1977.

D. Contractual SAFE/ADISS Commonality Study

1. On 8 June 1977 a contract was awarded to Booz-Allen Applied Research to assess the commonality of the SAFE and ADISS systems. This study is to (a) identify the areas and degree of commonality between the SAFE and ADISS systems, (b) develop the advantages to be derived from achieving this commonality, and (c) recommend management and technical procedures to be applied in implementing commonality objectives.

2. The contract provides for an oral presentation of the findings within 60 days (8 August) and a final written report within 90 days (8 September).

E. SAFE/ADISS Working Group

1. On 23 June 1977 under the chairmanship of the IC Staff, a SAFE/ADISS Working Group of CIA, DIA and NSA was established to prepare a staff study on how to establish a joint ADISS/SAFE project office.

III. DISCUSSION

A. Management Options

1. There are numerous management options that could be utilized to create a joint project office. Most of these options, however, are variations on three basic concepts: executive agent; a jointly staffed office similar to the current NPIC; or an IC Staff office.

2. In determining the criteria that should be present within the best organizational structure, we opted for those that would provide clear and clean lines of authority and strong overall direction yet be sensitive to the varying interests of CIA users and DIA users and consumers. This is critical because the daily problems that surface in any major system development will be complicated by many additional ones that will arise in designing a system(s) to serve two or more agencies. Any organizational structure involving multiple reporting, direction and command channels will have extreme difficulty in controlling the contractor(s), testing the system and phasing the system into service.

3. We considered, but discarded a management structure in which one agency of the Intelligence Community would act as the executive agent for the Project. Under any combination based on this concept, we felt there would be communication problems and considerable adjudication and review requirements. There would be no opportunity for dual agency employee participation in the project but more importantly the user requirements of the outside agencies could be diminished or distorted resulting in a system that did not meet user requirements. The outside agencies because they did not participate in system development could claim the resultant system was one developed by the executive agent merely to serve his particular requirements.

4. We also considered, but discarded, a DCI/IC Staff office structure charged with developing the SAFE/ADISS system perhaps as the beginning of a new Community office that would eventually extend its jurisdiction to all Community ADP and telecommunications management and planning. We felt that this approach would be too costly in new staffing and other overhead requirements, too great a risk to an analytical support system to have its original development under the control of a new organization, trying to supervise a major developmental project and organize itself at the same time, too great a risk also to the user requirements within both agencies because such an organization would quickly become remote from the "real analytical world" and lastly there would be no dual agency participation.

5. The management structure that meets most of our criteria and one that offers, we feel, the greatest success for developing and implementing a SAFE/ADISS system is a structure jointly staffed by the two agencies but located within, subject to, and using the administrative facilities of one of the two agencies. This staff study describes how such a joint project office could be formed and how it would operate. It does not cover all the administrative details and specifications of such a structure. These would be developed jointly with the two agencies.

B. Establishment of the CIA-DIA Joint Project Office (CDJPO)

1. We view establishment of the CDJPO as a two-phase process. The transition phase, effectively in being at this time, requires formal identification of management responsibility and a joint structure to oversee current project activities. Subsequent establishment of the CDJPO can be accomplished by a Memorandum of Understanding (MOU) between the Director of the Central Intelligence Agency and the Deputy Secretary of Defense. This MOU must address in detail matters such as staffing, budget, and fiscal arrangements, housekeeping, management and review procedures, configuration and data base management, functional tradeoffs, etc. This two-phase approach will require CIA and DIA to continue, uninterrupted, current contractual studies to derive technical definitions and system specifications for fulfilling user requirements. These efforts, in any scheme of joint project development, must be accomplished before any kind of specific system(s) for either agency can be defined. We see no need to delay a joint project by requiring cancellation of two on-going contracts in favor of a single larger joint contract which must cover the same ground. Our approach will, however, require coordination of these two efforts. Concurrently, over the next several months, the CIA and DIA must prepare a MOU to create a CDJPO by 1 June 1978. We see the MOU being prepared by CIA and DIA management personnel who are involved in the current SAFE and ADISS contracts.

a. SAFE/ADISS Steering Committee--Overall responsibility for both the transition phase and later establishment and operation CDJPO will rest with the CDJPO Steering Committee. The Committee will be composed of the DDI/CIA and the Chief, Systems Planning Office, DIA. The Committee would be responsible for executive direction and oversight of all joint activities. It could draw on respective agency staffs for expertise and recommendations in addition to that available in existing project staffs or the subsequent CDJPO staff.

b. The Transition Phase--Within the existing SAFE and ADISS projects, restructuring will permit continuation of current definition contracts and also emphasize the identification of commonalities in the two agencies' required systems. A Commonality Identification Group (CIG) will be created, responsible to the Steering Committee to document areas of commonality. The CIG will be comprised of the ADISS User Requirements Manager and the Deputy Director, SAFE Project Office. Both would draw on the staffs of the existing ADISS and SAFE project offices as required. Quarterly reports on their progress and the details of commonality will be provided the Steering Committee for approval and subsequent CIA and DIA agency comment. The transition management structure, depicted in Figure 1, would remain in being until 1 June 1978, unless sufficient system definition information is available earlier to permit an earlier creation of the CDJPO.

c. The CIA-DIA Joint Project Office (CDJPO)--The creation of the CDJPO would be accomplished through combining the existing SAFE and ADISS project staffs. The CDJPO would be located in the CIA facilities. The CDJPO, organized as shown in Figure 2, will have the current SAFE Project Officer as the CIA-DIA Joint Project Manager (CDJPM) and the current ADISS Project Officer as the Deputy, CDJPM. A Liaison Office will be established to maintain liaison with respective CIA and DIA staffs, affected outside agencies and with the various Congressional oversight committees. Supervision of subordinate project elements will be as follows:

System Requirements Division-DIA
Systems Engineering Division-CIA
Procurement Division-CIA
Operations, Test and Evaluation Division-DIA

Additionally, the CDJPM and his deputy, the Steering Committee, and a representative from IHC will advise the CDJPM on policy for the management of the project and concurrent implications on established CIA, DIA/DoD, and Community policies. Discussion follows on various details of creation and operation of the CDJPO.

Figure 1:

TRANSITIONAL PERIOD

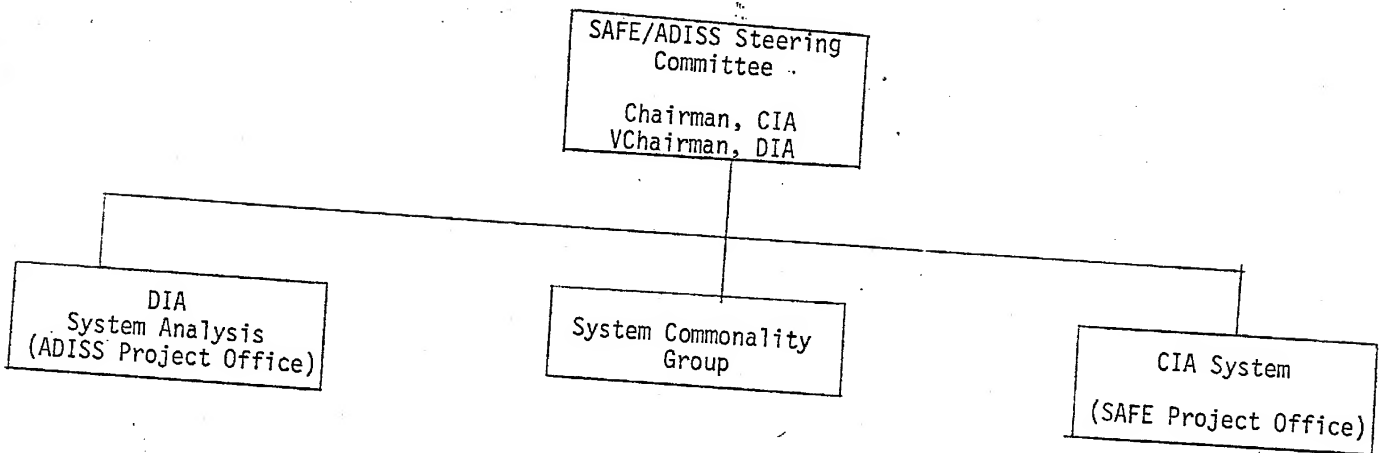
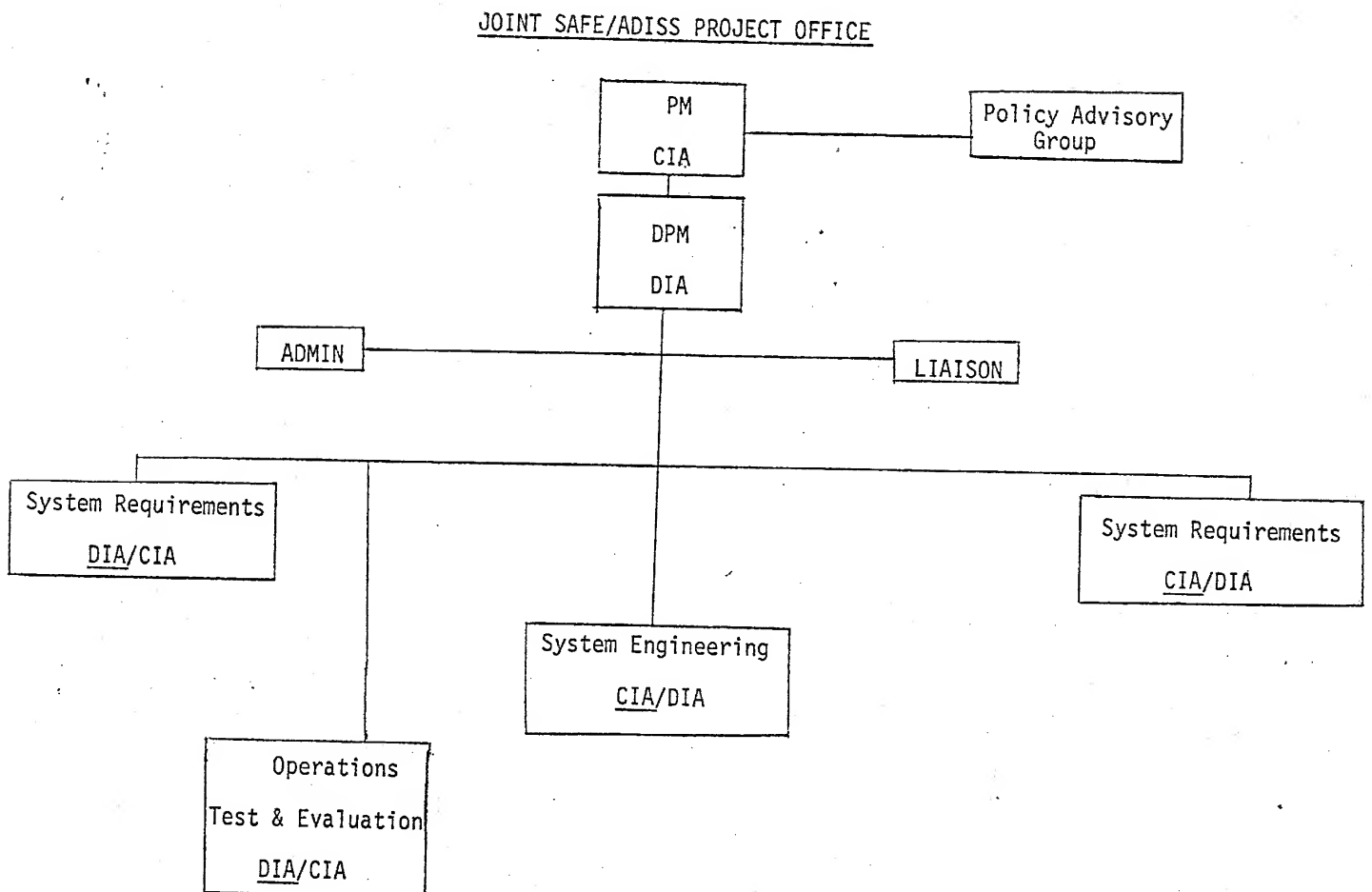


Figure 2:



2. Staffing--The CDJPO can be created from the current CIA/SAFE staffs in OCR and ODP and the DIA/ADISS current and planned staff. We estimate that 45 positions shared by the two agencies would be required for staffing the project office. The number, however, may increase or decrease dependent upon the responsibilities of the project office as defined in the memorandum of understanding. Most of the staffing details would be spelled out in this memorandum of understanding. The following general guidelines are recommended:

a. DIA personnel would be assigned on a non-reimbursable basis.

b. Personnel assigned to the project office, other than contract personnel and consultants, would be acquired from within each agency. Outside hires would be authorized only after each agency has certified that no qualified personnel are available.

c. Contract personnel would be hired in accordance with CIA regulations and procedures.

d. The chief and deputy chief of the project office would decide the suitability of the individuals nominated by each agency for the project and could request a replacement if an individual is not performing.

e. Performance appraisals would be prepared by the appropriate project office supervisor. Copies of the appraisal forms on DIA employees will be forwarded to DIA as would all training completed certificates and similar documents.

f. Generally, personnel and security regulations of CIA would be followed but these could be modified in negotiation with DIA.

3. Management and Control--The ADISS/SAFE system(s) development would be carried out by the CDJPO, which will define, design, develop, and bring to operation the joint system. The CDJPO will receive overall direction from CIA's Deputy Director for Intelligence (DDI) and the Chairman of the CDJPO Steering Committee. Status and work direction would be reviewed periodically by the CDJPO Steering Committee.

4. Budget and Fiscal--Overall project budget and fiscal coordination, preparation, and justification will be accomplished by the CDJPM subject to the review and approval of the Steering Committee. Each agency will be responsible to budget for its

users' requirements, and transfer funds as required to the CDJPO Procurement Division. ODDI/CIA would budget for the CIA staff personnel assigned to CDJPO; RCC/DIA would budget for the DIA staff personnel assigned to CDJPO. Contracts would be let in accordance with CIA procedures and regulations. The approval authorities for final expenditure would be the Chairman of the Steering Group. A revised FY 1979 Funding Program would be prepared by the Steering Committee as part of the establishment process of the CDJPO. For FY 1980 and beyond, this responsibility is with the CDJPO.

5. Housekeeping--CIA would furnish space, furniture, communications, and other administrative support for CDJPO. CDJPO would utilize CIA procurement channels and be subject to CIA fiscal controls and authority. The first requirement of the CDJPM would be to prepare a detailed Project Management Plan for approval of the Steering Committee. This plan would cover, but not necessarily be limited to, the management approach, fiscal, contract, study methodology, reviews and reporting, relationships with industry, etc.

C. DIA and CIA User Requirements

1. The CDJPO must be sensitive to the user requirements of both agencies. Since some tradeoffs will be necessary in any joint development, it is essential that CDJPO develop procedures to ensure that users are consulted regularly and that they have a responsive appeal route whenever design changes are made for reasons of feasibility or cost. Since it will be inevitable that some requirements of both agencies may not be met in certain trade-off situations, the appeal/reclama procedures in any joint development effort must be clear and efficient. These procedures should be explicitly spelled out in the CDJPO Management Plan. CDJPO may want to consider forming an adhoc interagency user council to work with its requirements staff to ensure timely and judicious processing of major design tradeoffs. An interagency user council would be an effective device for ensuring that users' views are heard. Their input could be footnoted to formally record the decision impact for the CDJPO Steering Committee.

2. To ensure that the user requirements represent that agency, all user requirements would have to be validated by that agency. Conflicting requirements that emerge from the design specification efforts for which no accommodation could be made within the feasibility or cost threshold would be reviewed (by the adhoc user council) before the requirements are referred for final action to the CDJPO Steering Committee.

3. A consolidated record of unsatisfied requirements would be maintained by CDJPM and published on a regular basis (for the interagency user council). This procedure would ensure that system users are notified, far in advance, of system limitations and are able to adjust appropriately.

4. CIA currently has quantified requirements for its SAFE system approved and well documented in the SAFE Functional Requirements Document (SAF-DO01D/77).

5. DIA currently has specified requirements plus a set of general requirements. For example, there is a requirement to replace DIAOLS with a system providing a greater capacity (specified) but there are also requirements to address the information processing needs of DIA and associated intelligence production activities (general). Both types of requirements are outlined in DIA's ADISS Plan dated 10 June 1977.

6. When user requirements of either agency conflict with existing or proposed procedures or interface standards, the affected agency would prepare the waiver request. Major deviations from DoD or CIA interface standards would require approval by the CDJPO Steering Committee to waiver action and implementation. We foresee this specific aspect of the joint development as the source of potential major technical problems in joint system design. This problem area, beyond the scope of this staff study, includes questions of data standards, message formats, DIA system interfaces as part of the Department of Defense Intelligence Information System (DODIIS) and with the Worldwide Military Command and Control System (WWMCCS), and information exchange protocols currently used by both the CIA and DIA. Any waiver involving an adverse impact on DODIIS or WWMCCS will require submission to the Secretary of Defense for final decision.

7. Both SAFE and ADISS are directed toward the objective of providing information handling capabilities to CIA analysts and to DIA analysts and consumers. We do not see this joint effort as the specific first step in creating a Community information handling system. To do so would radically change the original stated goals for SAFE and ADISS and add substantial costs and technical problems to the joint CIA-DIA system.

D. System Design and Development

1. Under a joint development effort, CDJPO would be responsible for consolidating characteristics and needs of the joint system and would contract for its design and development. CDJPO would monitor the contract, conduct in-progress reviews, develop testing and reliability programs, verify the system architecture, and conduct final government acceptance tests for both agencies.

2. Phased development of the joint system appears to be the best approach, that is, elements can be brought to service as developed rather than as one large delivery and cut-over. This phased development would permit orderly transition by function. It would require a modular design to ensure manageable sizing of developmental tasks.

3. The ultimate supporting hardware configuration may be physically centralized serving both agencies or distributed dependent upon functional requirements, costs, and operational considerations. Some interface to other Community systems will be necessary and this will be spelled out in greater detail in the final specifications. If the system is to meet its primary objective of supporting production analysts, interfaces must be generalized and should provide both security and loading protection in accordance with the type of analytical file, the data and security restrictions.

4. A major responsibility of the CDJPO as the joint system is designed and developed is to provide recommendations for its operation and maintenance subsequent to achieving the system's full operational capability in CIA and DIA. Consideration might be given to maintaining CDJPO as a permanent project office for the two agencies to handle the analytical support system's enhancements or modifications. An alternative would be use of the Operations, Test and Evaluation Division (OTED) as the follow-on office to maintain the joint system. This provision, however, should be spelled out in the memorandum of understanding and the joint management plan.

5. Documentation would follow a common standard. CDJPO would review and evaluate DoD and CIA standards and select one for all analysis and design documentation.

6. Contract deliverables will be reviewed by CDJPO and within each agency (and by the adhoc interagency user council) when verification or validation is required by the user constituency.

E. Status of On-Going Programs

1. The ADISS System Definition Study awarded in August 1977 and the SAFE Design Competition contract award scheduled for September 1977 should continue as planned during the formation of CDJPO. After CDJPO is created, it would assume the responsibility for both contractual efforts if then required. These two contracts for analysis and design will focus upon the commonality issue. The ADISS contract will be managed by DIA personnel with a member of

the SAFE project staff assigned to the ADISS staff supervising the contract. In a similar manner, a DIA employee from the ADISS technical staff will be on the team managing the CIA design competition. Any subsequent contractual efforts before the CDJPO is formed would consist of combined DIA and CIA personnel reflecting the joint development. Under this arrangement, both ADISS and SAFE goals can be pursued but without any interruption while the memorandum of understanding and the joint management and logistical plans are completed. Continuing these contracts as scheduled also prevents a one year delay that would occur by the re-initiation of the procurement phase for both contracts.

2. In the interim period before CDJPO is established, CIA and DIA personnel will continue their participation in each agency's source selection and project review processes as outlined in the interim joint management plan agreed to by the two agencies (SAF-A002A/77, 1 June 1977).

F. Major Milestones

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| Award DIA ADISS Study Definition Contract | August 1977 |
| Award CIA Design Competition Contract | September 1977 |
| DIA-CIA Initiate Preparation and Negotiations of CDJPO Memorandum of Understanding | Upon approval of this study |
| Complete CDJPO Memorandum of Understanding | 1 December 1977 |
| Establish CDJPO Planning Staff | 15 December 1977 |
| Complete Management and Logistical Plans for the Project (CDJPO Planning Staff)* | 1 March 1978 |
| Consolidate ADISS/PMO and SAFE/PMO into CDJPO | 1 June 1978 |

*Project Milestones would be established in the Joint Management Plan.

IV. CONCLUSIONS

A. It is possible to create a joint project office for CIA's SAFE and DIA's ADISS systems by a memorandum of understanding between the DCI and the Deputy Secretary of Defense.

B. There are several management options for a project office. A jointly staffed office located in one of the two agency's facilities appears the soundest of all the available options for combined project management. Any joint ADISS/SAFE system could be defined, designed, developed and brought into operation by this joint project management office.

C. Major concerns with this proposed organizational structure are:

1. The joint project development will encounter significant technical problems resulting from DoD interface requirements incumbent upon ADISS. The required ADISS-DODIIS and -WWMCCS interfaces, which would have been automatically considered and incorporated in the DIA ADISS development will require separate examination and validation in the joint venture. Any joint development which does not serve to improve DIA's DODIIS interfaces could complicate existing DoD problems in managing and consolidating its internal intelligence handling systems and ultimately serve to inhibit or make more difficult improvements in the overall Community interchange of intelligence data.

2. The combined project office will be confronted with more complex technical and management problems than those confronted by individual project offices located in each agency by virtue of the system size, security considerations, message formats, and overall scope of the problem to be addressed. There is the inherent danger that in the effort to reduce perceived duplication that the joint system development will lead to a system which will be used only by one agency.

3. One agency might be in a position to exert more influence over the project than the other.

4. A joint project office would be more remote from the users for whom the SAFE and ADISS systems are being developed. It will require an intensive effort by the joint project office and by the two agencies to ensure that these user requirements are not distorted.

V. RECOMMENDATIONS

A. That a CIA-DIA Joint Project Office (CDJPO) be established in a two-phase process with:

1. A transition phase in which the current work being contracted on SAFE and ADISS continues as scheduled to determine technical definitions of the two agencies' user requirements. These two efforts will be supervised by a SAFE-ADISS Steering Committee composed of the CIA's Deputy Director for Intelligence and DIA's Chief, Systems Planning Office and assisted by a jointly-staffed Commonality Identification Group.

2. A CIA-DIA Joint Project Office (CDJPO) be established by a Memorandum of Understanding signed by the Director, Central Intelligence Agency and the Deputy Secretary of Defense. The CDJPO, staffed by personnel from both the CIA and DIA and located in CIA facilities, will be responsible for defining, designing, developing and bringing to operation an intelligence information handling system to support user requirements in the CIA and DIA. It is further recommended that:

a. The CDJPO be under supervision of the CIA Deputy Director for Intelligence (DDI) as Chairman of a SAFE-ADISS Steering Committee.

b. That the CDJPO Project Manager be the current SAFE Project Manager and the Deputy CDJPO Project Manager be from the ADISS Project Office.

c. That the staff for the CDJPO be created from the current CIA/SAFE and DIA/ADISS current and planned staff.

d. That the CDJPO be responsible for overall project budget and fiscal matters with each agency responsible for budgeting for its users' requirements.

e. That a Policy Advisory Group be formed consisting of the CDJPO Project Manager and his Deputy, the Steering Committee and a representative from the Intelligence Handling Committee, Intelligence Community Staff. This Group will advise the Project Manager of matters of policy as it affects the CIA, DIA and Intelligence Community.

B. That the above recommendations be implemented in accordance with the proposed milestones presented in Section III-F of this paper.

APPROVED:

Director of Central Intelligence

DISAPPROVED:

Director of Central Intelligence

DATE: _____